JVC

SERVICE MANUAL

MODEL JR-S150

STEREO RECEIVER

No. 2417
MAY 1977

Contents

Page

1. Specifications 2
2. Removal of Top Cover, Bottom Plate 3
3. Main Parts Location and Part Numbers 4
4. Exploded Views and Part Numbers
   - 4-(1) Front Panel 5
   - 4-(2) Rear Panel 6
5. Dial Stringing Procedure 7
6. FM/AM Tuner Alignment Procedures
   - 6-(1) FM Section 8
   - 6-(2) AM Section 10
7. Power Amplifier Adjustment Procedures
   - Idling Current Adustment 11
8. Printed Circuit Board Ass'y and Parts List
   - 8-(1) TFC-20 FM/AM Tuner & Equalizer Amp. P.C. Board Ass'y 13
   - 8-(2) TXX-51 Push Switch P.C. Board Ass'y 19
   - 8-(3) TPS-53Y AC Fuse P.C. Board Ass'y 19
   - 8-(4) TAP-268B Power Amp. & Power Supply P.C. Board Ass'y 20
   - 8-(5) TXX-68A Lamp P.C. Board Ass'y 22
   - 8-(6) TAC-472A Volume & Tone Control P.C. Board Ass'y 23
   - 8-(7) TAC-462B Terminals P.C. Board Ass'y 24
9. Packing Materials and Part Numbers 25
10. Accessories List 25
11. Schematic Diagram 26
12. Transistor, I.C. and Diode Lead Identification 28

1. Specifications

DIMENSIONS	: 160.8 (H) x 502 (W) x 395 (D) mm	
WEIGHT (Net)	: 10.2 kg	
AMPLIFIER SECTION		
RMS Power	: 20 watts per channel, min. RMS at 8 ohms from	
(Both channels driven)	40 Hz to 20 kHz with no more than 0.5 % total harmonic distortion	
RMS Power	: 22 watts per channel at 8 ohms	
(Both channels driven at 1 kHz)	25 watts per channel at 4 ohms	
Total Harmonic Distortion	: 0.5 % at rated output power	
Damping Factor	: 40 at 8 ohms	
Input Sensitivity, Impedance and	: PHONO	2.5 mV/50 kΩ & 75 dB
Signal-to-Noise Ratio	AUX	180 mV/40 kΩ & 95 dB
(IHF short circuit A network)	TAPE MON	180 mV/40 kΩ & 95 dB
Recording Output Level	: 180 mV (Pin)	
	30 mV/80 kΩ (DIN)(Europe only)	
Frequency Response	: 15 Hz to 40 kHz + 0.5 dB, - 2.0 dB	
Loudness Control Range	: + 10 dB at 50 Hz, + 6 dB at 10 kHz	
(Volume Control at -30 dB position)		
Tone Control	: BASS	± 10 dB at 100 Hz
	TREBLE	± 10 dB at 10 kHz
FM TUNER SECTION		
Usable Sensitivity	: 2.2 μV	
Total Harmonic Distortion at	: 0.4 % (Mono) at 100 Hz or 1 kHz	
1 kHz and 100 % Modulation	0.6 % (Mono) at 6 kHz	
	0.6 % (Stereo) at 100 Hz or 1 kHz	
	0.8 % (Stereo) at 6 kHz	
Signal-to-Noise Ratio (IHF weighted)	: 75 dB (Mono), 65 dB (Stereo)	
Selectivity	: 50 dB IHF Alternated	
Capture Ratio	: 2.5 dB	
Image Rejection	: 60 dB	
IF Rejection	: 80 dB	
Stereo Separation	: 30 dB at 50 Hz, 40 dB at 1 kHz, 30 dB at 10 kHz	
AM TUNER SECTION		
Usable Sensitivity	: 30 μV, 300 μV/m	
Image Rejection	: 45 dB	
Selectivity	: 25 dB	
IF Rejection	: 50 dB	
Signal-to-Noise Ratio	: 55 dB	
POWER SUPPLY SECTION		
Power Source	: AC 220 V, 50 Hz	
Power Consumption	: 175 W	

Design and specifications subject to change without notice.

2. Removal of Top Cover and Bottom Plate

Procedure and Part Numbers

1. Remove 4 screws (Item No. ③) through the both sides of the cover and two screws (Item No. ②) from the back of top cover.
2. Remove the top cover.
3. Remove 4 screws (Item No. ⑤) from bottom plate (Item No. ④) and remove the bottom plate from the chassis.

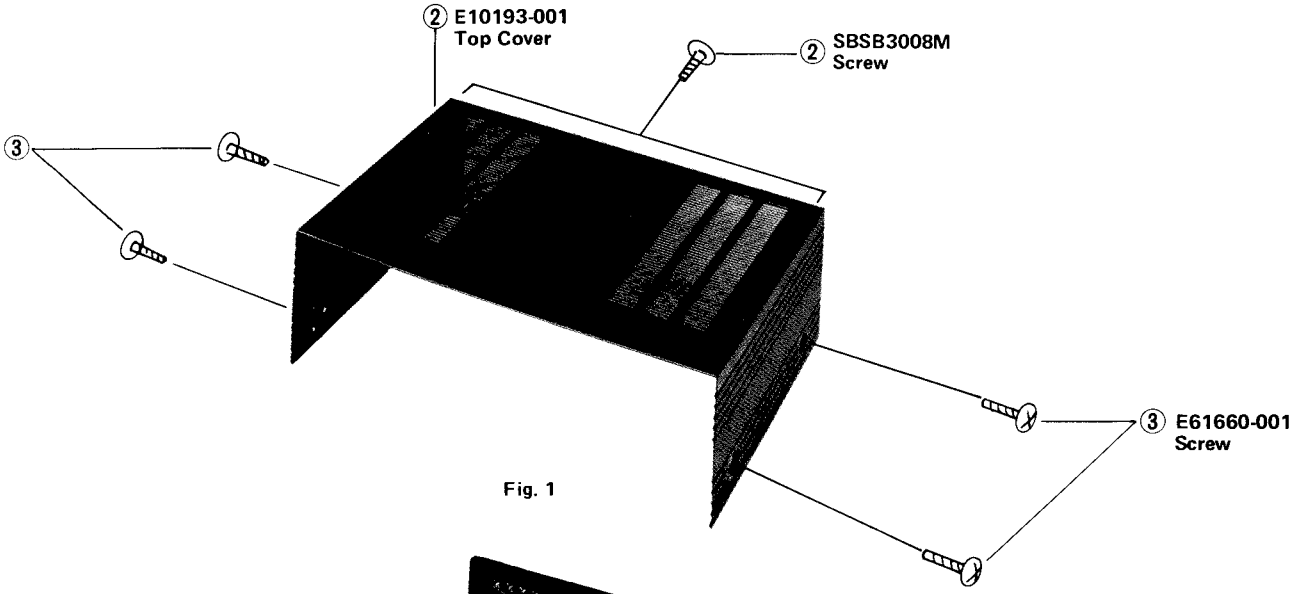


Fig. 1

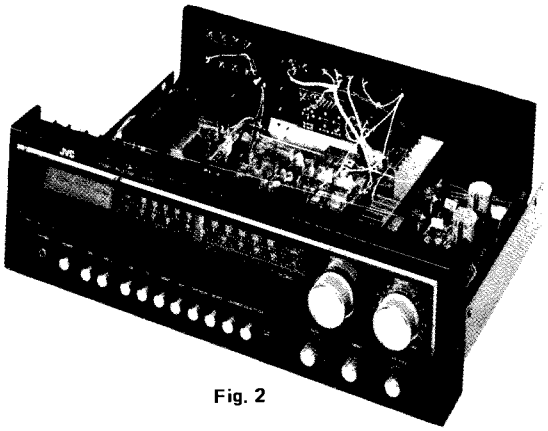


Fig. 2

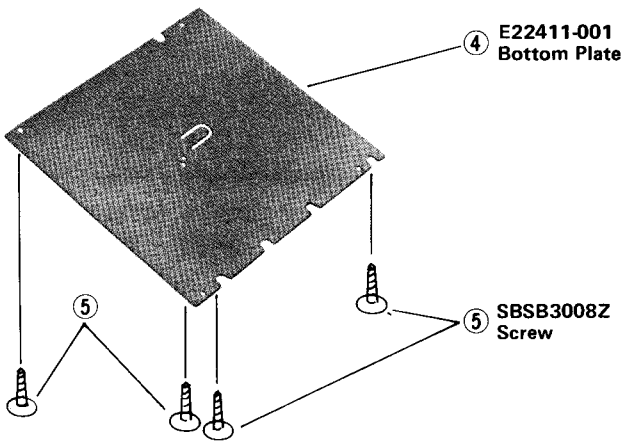


Fig. 3

3. Main Parts Location and Part Numbers

Top View

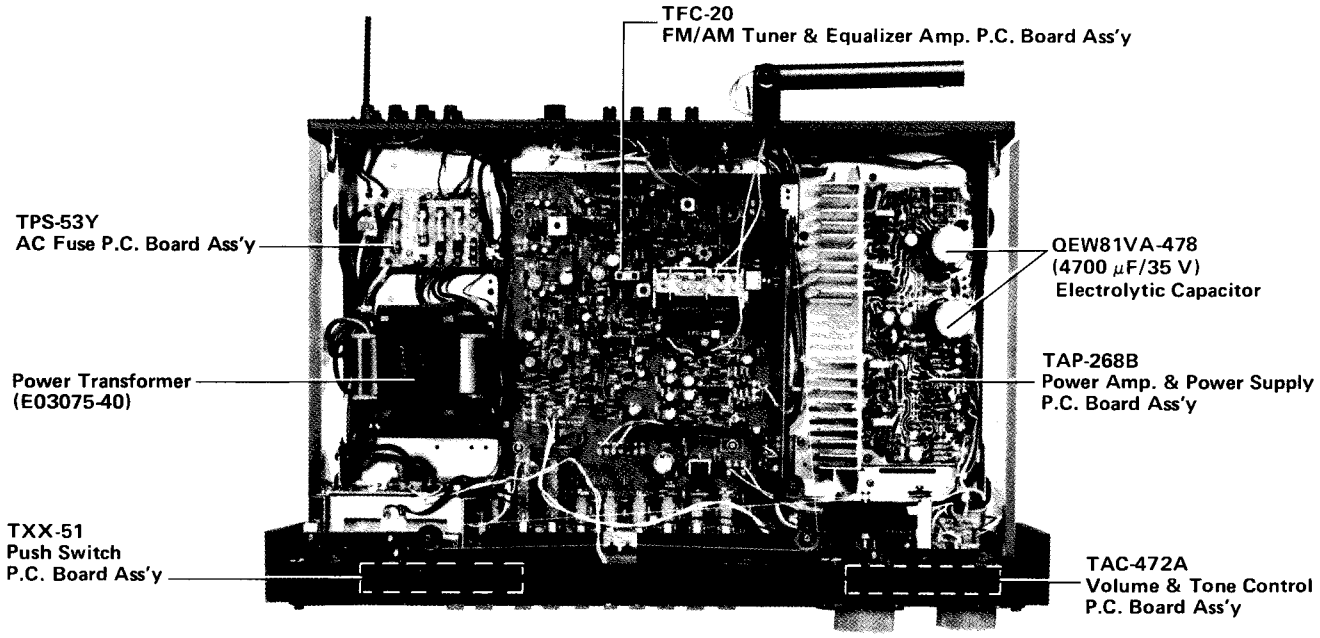


Fig. 4

Bottom View

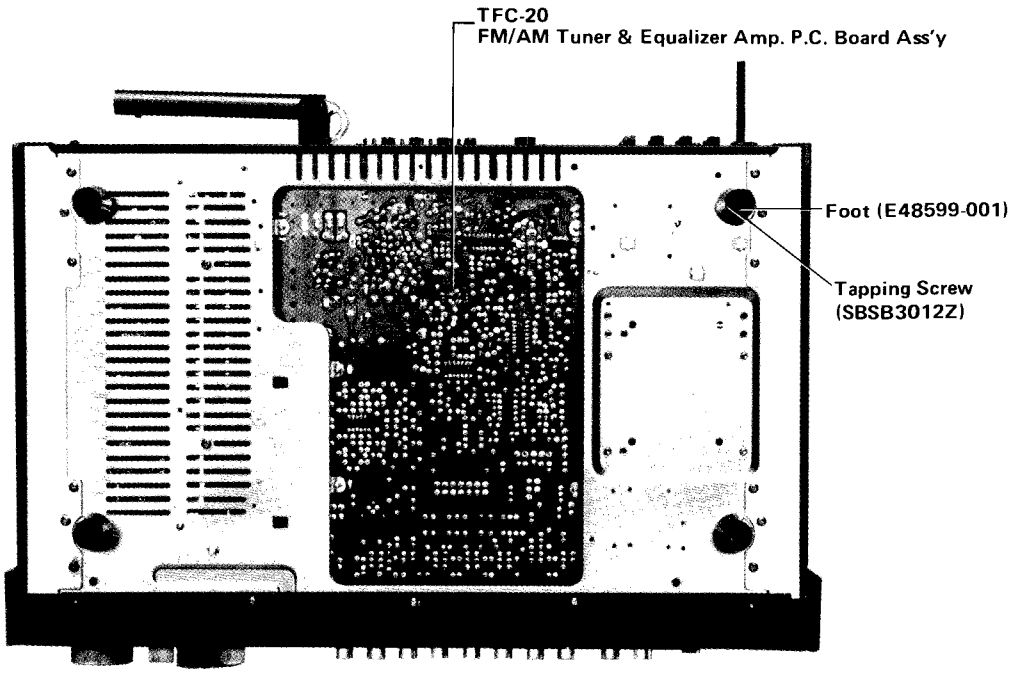


Fig. 5

4. Exploded Views and Part Numbers

4-(1) Front Panel

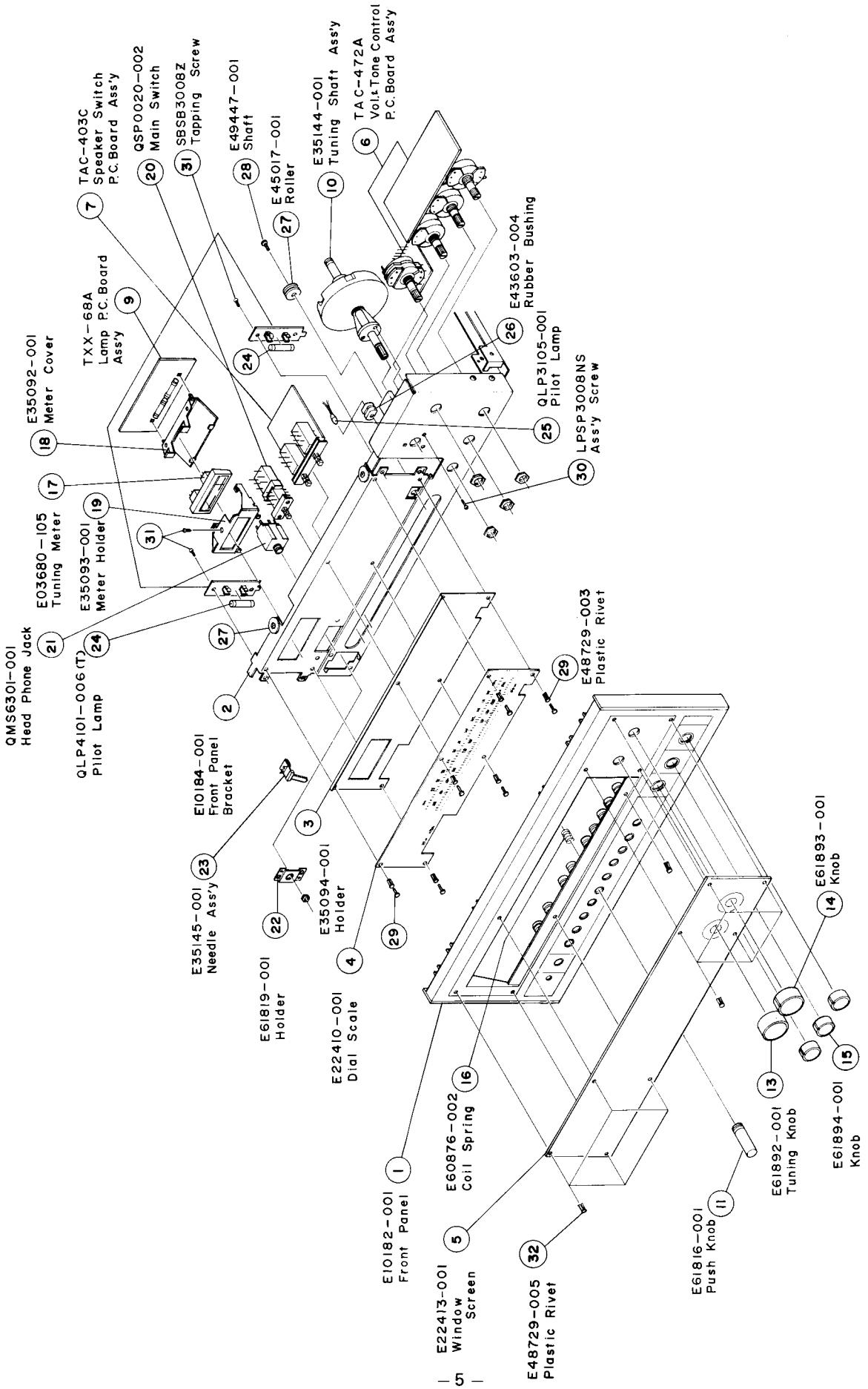

1 E10182-001 Front Panel
2 E10184-001 Front Panel Bracket
3 E22410-001 Dial Scale
4 E35094-001 Holder
5 E22413-001 Window Screen
6 TAC-472A Vol.&Tone Control P.C.Board Ass'y
7 TAC-403C Speaker Switch P.C.Board Ass'y
9 TXX-68A Lamp P.C.Board Ass'y
10 E35144-001 Tuning Shaft Ass'y
11 E61816-001 Push Knob
13 E61892-001 Tuning Knob
14 E61893-001 Knob
15 E61894-001 Knob
16 E60876-002 Coil Spring
17 E03680-105 Tuning Meter
18 E35092-001 Meter Cover
19 E35093-001 Meter Holder
20 QSP0020-002 Main Switch
21 QMS6301-001 Head Phone Jack
22 E61819-001 Holder
23 E35145-001 Needle Ass'y
24 QLP4101-006(T) Pilot Lamp
25 QLP3105-001 Pilot Lamp
26 E43603-004 Rubber Bushing
27 E45017-001 Roller
28 E49447-001 Shaft
29 E48729-003 Plastic Rivet
30 LPSP3008NS Ass'y Screw
31 SBSB3008Z Tapping Screw
32 E48729-005 Plastic Rivet

Fig. 6

4-(2) Rear Panel

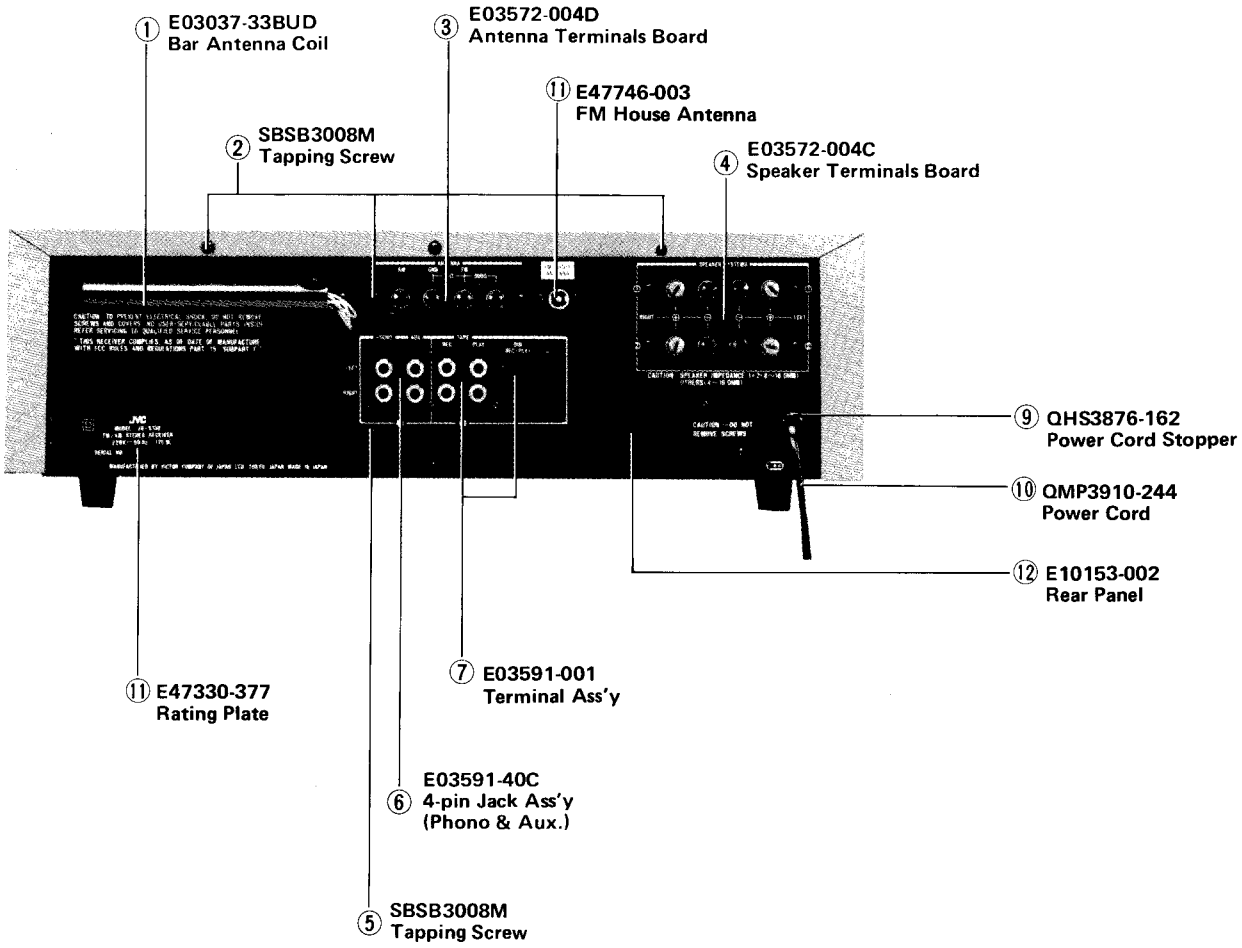


Fig. 7

5. Dial Stringing Procedure

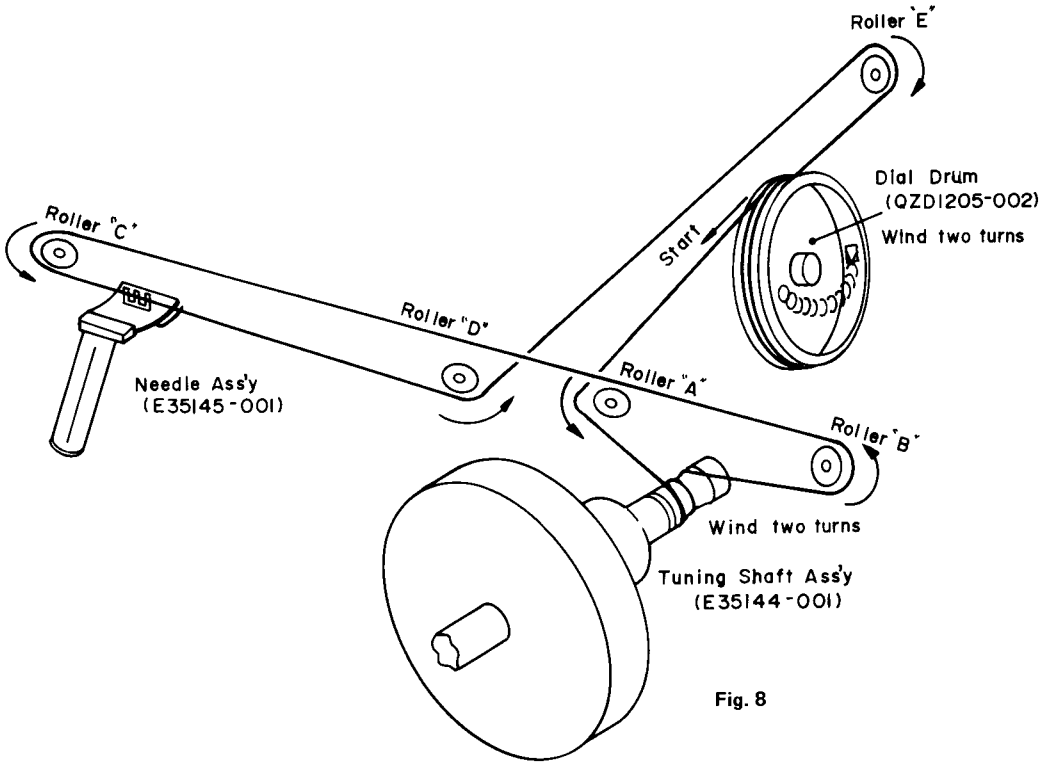


Fig. 8

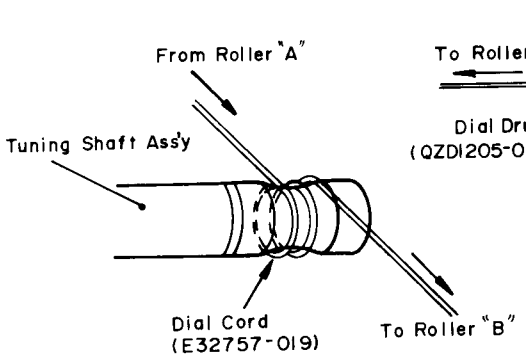


Fig. 9

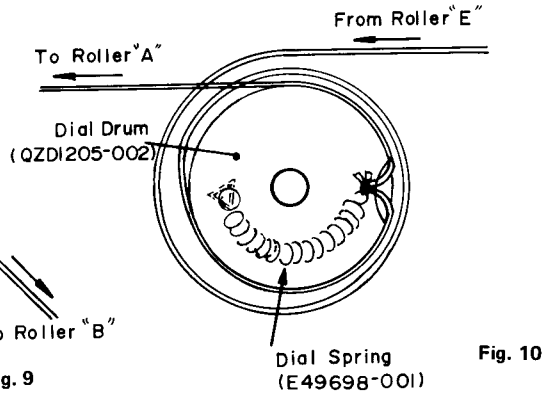


Fig. 10

(1) Remove heat sink and power supply P.C. Board ass'y.
(2) Remove dial pointer and old dial cord.
(3) Tie end of new dial cord to one end of dial spring, connect other end of dial spring of bottom left eye inside dial drum, see Fig. 10.
(4) Rotate the tuning capacitor dial drum to its maximum counterclockwise.
(5) Run the dial cord through the slot in the rim of the dial drum.
(6) Guide the dial cord around rollers "A". Keep the dial cord taut during this procedure.
(7) Pull dial cord taut and wrap 2 turns counterclockwise around tuning shaft. Refer to Fig. 9.
(8) Guide the dial cord under and around roller "B", around rollers "C","D" and "E". Keep the dial cord taut during this procedure.
(9) Guide the dial cord over the dial drum and wind 2 turns counterclockwise. See Fig. 10.
(10) Turn the tuning shaft to rotate the dial drum fully counterclockwise and fully clockwise to distribute the tensioning along the dial cord.
(11) Place the dial cord over and under the tabs on the rear of the dial pointer (see detail) and place the pointer on the top of the dial panel rail.
(12) Turn the tuning shaft counterclockwise. Slide the dial pointer to zero (0) calibration marker on the logging scale while holding tuning shaft fully clockwise. Cement the dial pointer to dial cord to prevent slippage. Allow cement to dry thoroughly.
(13) Reinstall the heat sink and power supply P.C. Board ass'y. Reconnect all plugs (removed previously) to their respective sockets.
(14) Check dial calibration. Refer to FM/AM alignment.
(15) Replace top cover.

6. FM/AM Tuner Alignment Procedures

TFC-20 FM/AM Tuner & Equalizer Amp. P.C. Board Ass'y

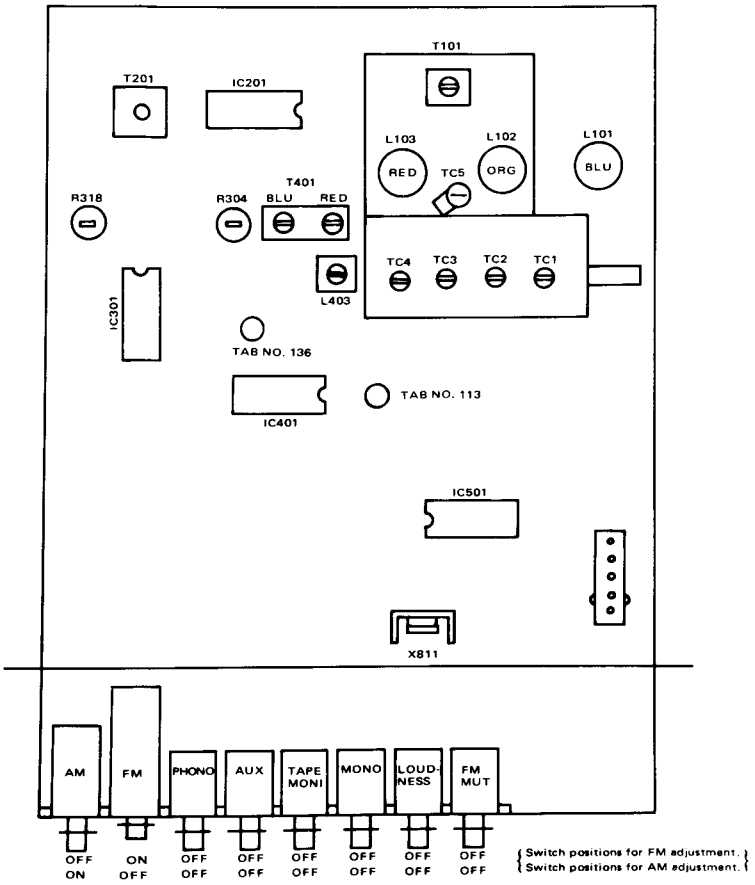


Fig. 11

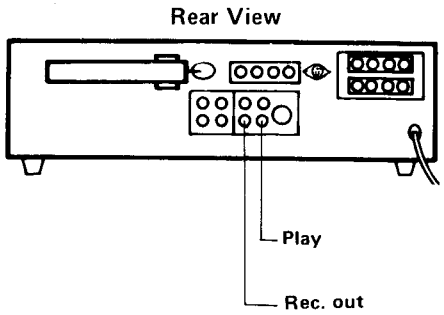


Fig. 12-A

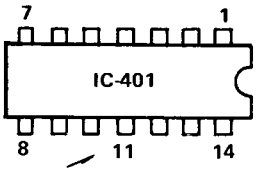


Fig. 12-B

11th Pin for AM IF Stage Adjustment

6-(1) FM Section

Discriminator, Center Meter, Distortion and Signal Gain

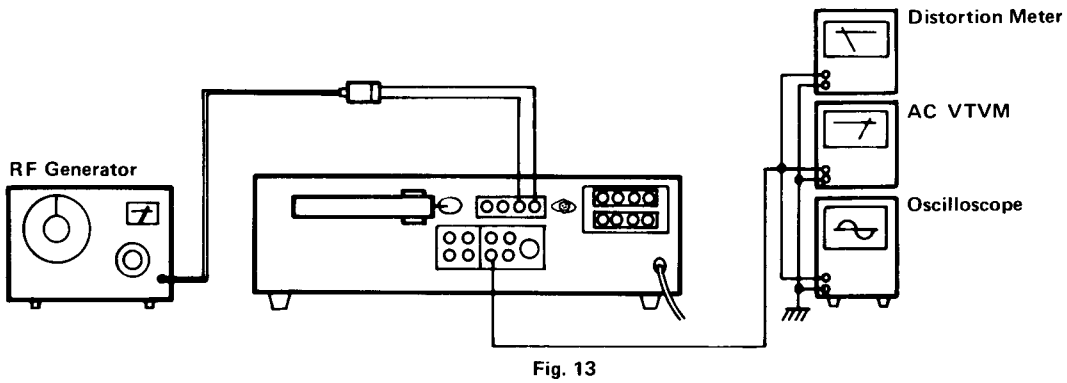


Fig. 13

1. Connect an RF generator, 1 kHz modulation and 75 kHz deviation, to the antenna terminals on the rear panel through a dummy antenna.
2. Connect an oscilloscope, distortion meter and VTVM to the Rec. Out Jacks on the rear panel.
3. Tune to a frequency where there is no broadcasting.
4. Adjust the bottom core of T201 so that the center meter indicates "0" (zero).
5. Set the generator to 98 MHz.
6. Set the dial pointer to 98 MHz.
7. Adjust the top core of T201 so that the distortion is minimized at a value less than 0.4 %.

Tracking and Sensitivity

Precaution: No adjustment is required. The tracking and sensitivity has been adjusted properly and completely at the factory. If any special reason occasioned, take the following procedures very carefully:

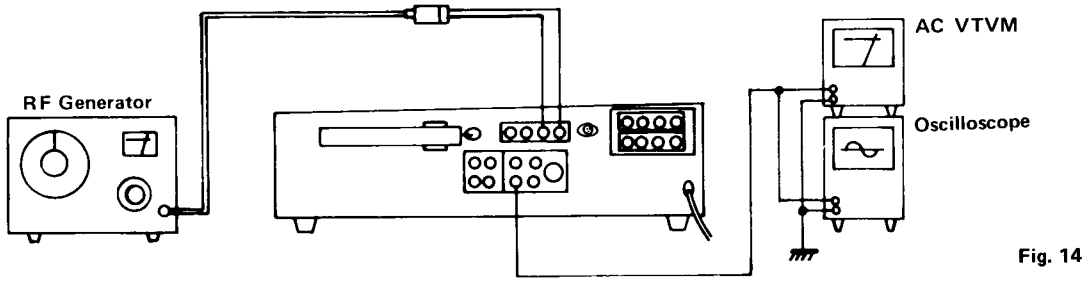


Fig. 14

Low Frequency

1. Connect an RF generator to the antenna terminals on the rear panel through a dummy antenna.
2. Set the RF generator to 88 MHz, a modulation of 1 kHz and a deviation of 75 kHz, to provide an input of 2 μV.
3. Connect a VTVM and an oscilloscope to the Rec. Out Jacks on the rear panel.
4. Set the dial pointer to 88 MHz.
5. Adjust three coils L103, L102 and L101 in the tuning gang to maximize the output.

High Frequency

6. Set the RF generator to 108 MHz, a modulation of 1 kHz and a deviation of 75 kHz, to provide an input of 2 μV.
7. Set the dial pointer to 108 MHz.
8. Adjust the FM trimmers TC5, TC3 and TC1 in the tuning gang to maximize the output.
9. Repeat these high and low frequency adjustments alternately until maximum sensitivity is obtained.

Multiplex and Stereo Separation

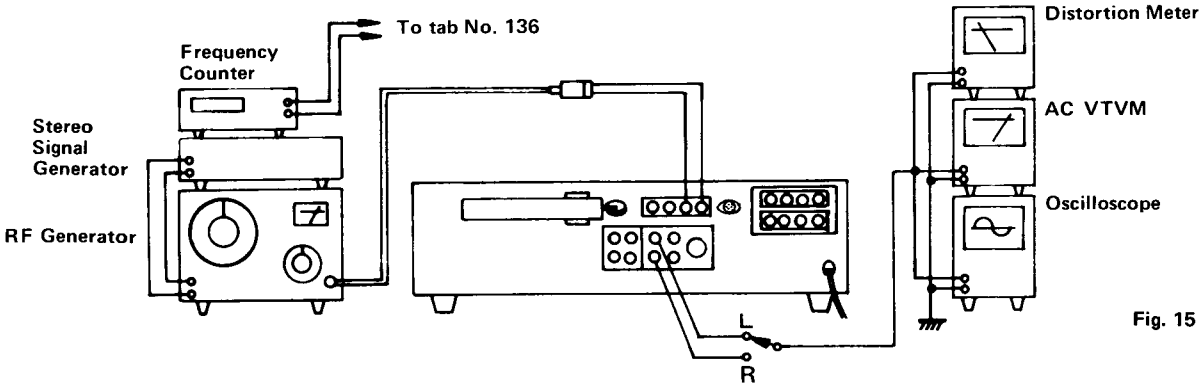


Fig. 15

Multiplex

1. Set a stereo signal generator as follows: Modulation frequency 1 kHz, Deviation pilot 7.5 kHz, Main and Sub. 67.5 kHz. Connect its output to an RF generator.
2. Connect the RF generator to the antenna terminals through a dummy antenna.
3. Connect a VTVM, an oscilloscope and a distortion meter to the Rec. Out Jacks.
4. Set the RF generator to 98 MHz and an output of 1 mV.
5. Set the dial pointer to 98 MHz.
6. Connect a frequency counter to Tab No. 136.
7. Switch off the pilot signal of the stereo modulator.
8. Adjust R304 so that the frequency counter indicates 76 kHz (± 0.05 kHz).

Stereo Separation

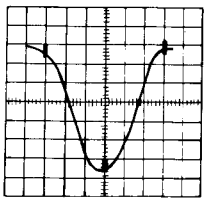
9. Switch the selector of the stereo modulator to left channel modulation.
10. Adjust R318 so that the output of the right channel is minimized.
11. Switch the selector of the modulator to right channel modulation.
12. Adjust R318 so that the output of the left channel is minimized.
13. Set R318 to average, if the separation of right and left are different.

Note: Keep the "MONO" pushbutton out during this adjustment procedure of stereo separation.

6-(2) AM Section

IF Stage

1. Connect an output of sweep generator to the AM input Tab No.113.
2. Set the sweep generator to 455 kHz.
3. Connect an input of sweep generator to the AM output (11th Pin of IC401). Refer to Fig 12-B.
4. Adjust the blue and red cores of I.F. Transformer T401 so that the output is maximized. Refer to Fig. 16.



IF OUT

Fig. 16

Tracking and Sensitivity

Low Frequency

1. Connect an RF generator to the antenna terminals on the rear panel, set this to 600 kHz with 30 % modulation at 400 Hz.
2. Connect an AC VTVM and an oscilloscope to Rec. Out Jacks on the rear panel.
3. Set the dial pointer to 600 kHz.
4. Adjust Osc. transformer L403 and the ferrite bar antenna to maximize the output signal.

High Frequency

5. Set the RF generator to 1,400 kHz with 30 % modulation at 400 Hz.
6. Set the dial pointer to 1,400 kHz.
7. Adjust the trimmers TC4 and TC2 in the AM tuning gang so that the output signal is maximized.
8. Repeat these high and low frequency adjustments alternately until maximum sensitivity is obtained.

7. Power Amplifier Adjustment Procedures

Idling Current Adjustment

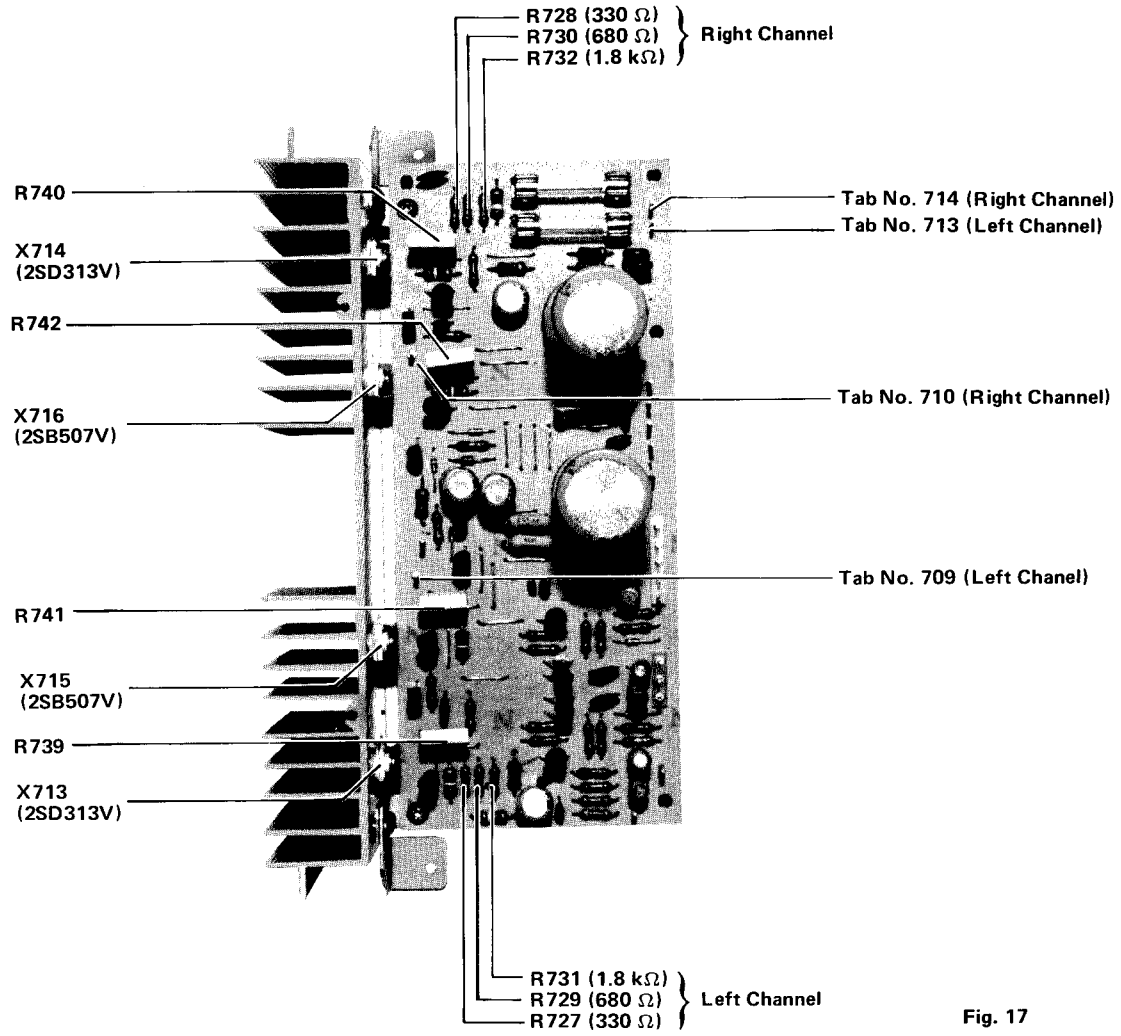


Fig. 17

For Left Channel Adjustment

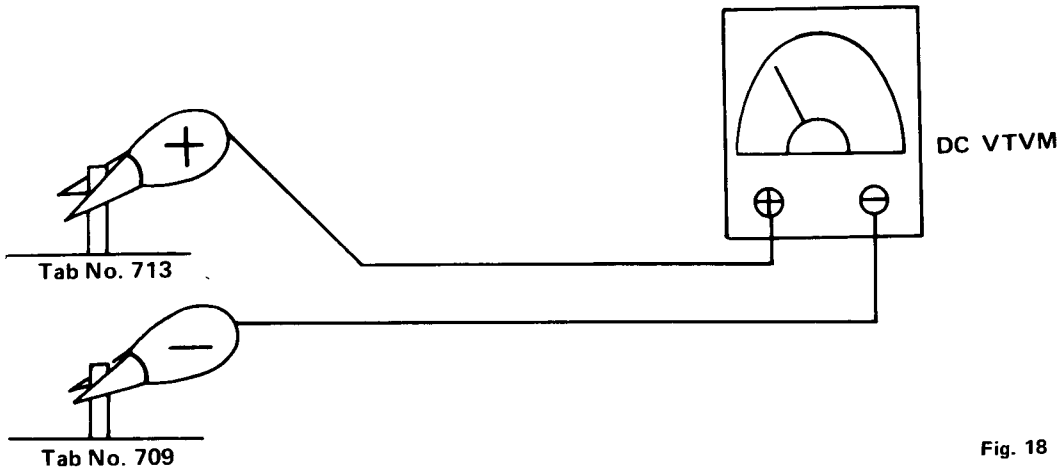


Fig. 18

Precautions

When the following parts are replaced, idling current adjustment is required.

1. Power and driver transistors X705 through X716.
2. Resistors R721 through R742.

> **Note:** Idling current is obtained by measuring the voltage of the emitter resistor connected to the power transistor. For this purpose, check points, Tab. No. 709 (710) and 713 (714), are located on TAP-268 P.C. Board. Adjust the resistor(s) of left and right channels for 5 to 20 mV following the steps below.

Procedures

1. Be sure that the following resistors are connected to TAP-268 P.C. Board Ass'y as shown in Fig. 22.

Item No. : Value	R727 (R728): 330 Ω	R729 (R730): 680 Ω	R731 (R732): 1.8 kΩ
Part Number	QRD141J-331	QRD141J-681	QRD141J-182

If one (or more) is (are) disconnected at the factory, connect resistor(s) having the same value as specified above.

2. Connect GND lead wire of DC VTVM to Tab No. 709 (710) and the other lead wire to Tab. No. 713 (714). Refer to Fig. 23.

> **Precaution:** Allow the set to warm up at least 2 minutes before connecting DC VTVM.

3. Read the pointer position of DC VTVM and follow the procedures listed below.

If the DC VTVM pointer position indicates	**Channel (L or R)**	**Procedures**
0 mV – 2 mV	Left Right	Disconnect R729 & R731 (680 Ω & 1.8 kΩ). Disconnect R730 & R732 (680 Ω & 1.8 kΩ).
2.1 mV – 5 mV	Left Right	Disconnect R729 (680 Ω) . Disconnect R730 (680 Ω) .
5.1 mV – 20 mV	Left & Right	Proper idling current range.
Over 21 mV	Left Right	Replace R729 (680 Ω) by a 330 Ω resistor. Replace R730 (680 Ω) by a 330 Ω resistor. Repeat procedures 2 and 3

8. Printed Circuit Board Ass'y and Parts List

8-(1) TFC-20 FM/AM Tuner & Equalizer Amp. P.C.Board Ass'y

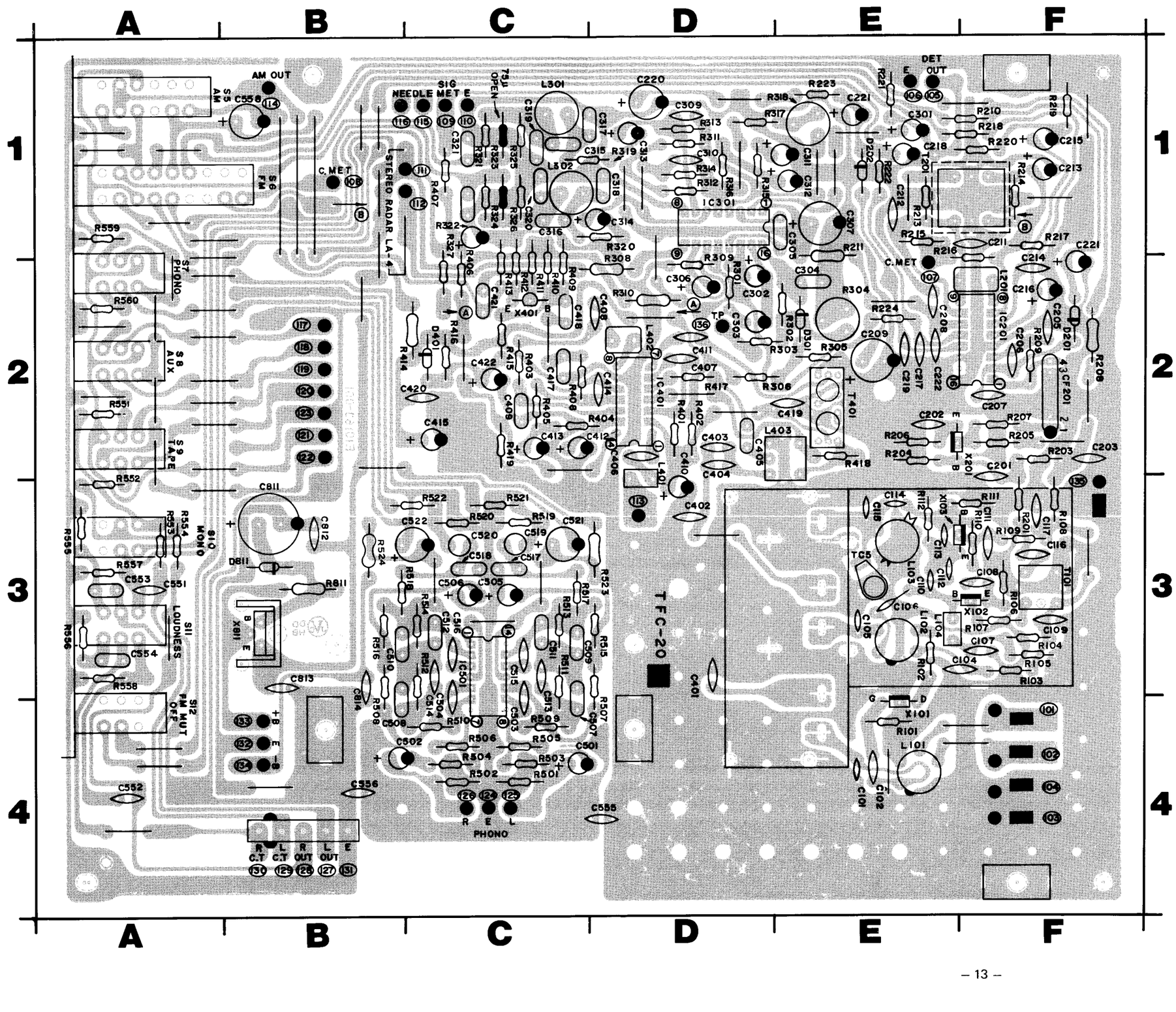


Fig. 19

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X101	2SK55 (D)	IDSS: 14 mA, NF: 3.5 dB (f=100 MHz)		FE Transistor	Hitachi
X102	2SC535 (B, C)	100 mW	700 MHz	Silicon Transistor	"
X103	2SC1342 (B, C)	"	250 MHz	"	"
X201	2SC461 (C)	200 mW	230 MHz	"	"
X401	2SC458 (C)	250 mW	"	"	"
X811	2SD325 (D, E)	10 W	8 MHz	"	Sanyo

Integrated Circuits

Item No.	Part Number	Rating		Description	Maker
IC201	HA1137W	500 mW		Integrated Circuit FM IF DET	Hitachi
IC301	HA1196	490 mW		" MPX	"
IC401	HA1151	500 mW		" AM IF DET	"
IC501	HA1452W	540 mW		" Equalizer	"

Diodes

Item No.	Part Number	Rating		Description	Maker
D201	IS2473			Silicon	Toyo Dengu
D202	IS2473			"	"
D301	IS2473			"	"
D401	IS2473			"	"
D811	WZ-130	13 V		Zener	JRC

Coils & Transformers

Item No.	Part Number	Rating		Description
L101	E03477-024			RF Coil
L102	E03477-35			"
L103	E03477-026			"
L104	E03522-2R2KY	2.2 μH		Choke Coil
L201	E03522-220K	22 μH		"
L301	E03587-103	0.01 μH		Coil
L302	E03587-103	"		"
L401	E03522-2R2KY	2.2 μH		Choke Coil
L402	E03522-391KY	390 μH		"
L403	E03079-29			AM CSC Coil
T101	E03078-39			I.F. Transformer
T201	E03134-020			FM Det. Transformer
T401	E03613-002			AM I.F. Transformer

Capacitors

Item No.	Part Number	Rating		Description
C101	QCS11HJ-180	18 pF	50 V	Ceramic
C102	QCS11HJ-101	100 pF	"	"
C104	QCF11HP-103U	0.01 μF	"	"
C105	QCS11HJ-180	18 pF	"	"
C106	QCS11HJ-100	10 pF	"	"
C107	QCS11HJ-101	100 pF	"	"
C108	QCF11HP-103U	0.01 μF	"	"
C109	QCF11HP-103U	"	"	"
C110	QCS11HJ-4R0	4 pF	"	"
C111	QCF11HP-103U	0.01 μF	"	"
C112	QCT05CH-100	10 pF	"	"
C113	QCT05CH-220	22 pF	"	"
C114	QCT05CH-7R0	7 pF	"	"
C115	QCT05SH-220	22 pF	"	"
C116	QCF11HP-223	0.022 μF	"	"
C117	QCF11HP-223	"	"	"
C201	QCS31HJ-470Z	47 pF	"	"
C202	QCF31HP-223Z	0.022 μF	"	"
C203	QCF31HP-223Z	"	"	"
C205	QCZ0107-473	0.047 μF	"	"
C206	QCZ0107-473	"	"	"
C207	QCZ0107-473	"	"	"
C208	QCF31HP-223Z	0.022 μF	"	"
C209	QCT25CH-150	100 μF	16 V	Electrolytic
C211	QCT25CH-150	15 pF	50 V	Ceramic
C212	QCF31HP-223Z	0.022 μF	"	"
C213	QEW61HA-105Z	1 μF	"	Electrolytic
C214	QCS31HJ-330Z	33 pF	"	Ceramic
C215	QEW51EA-475	4.7 μF	25 V	Electrolytic
C216	QEW51EA-475	"	"	"
C217	QCF31HP-223	0.022 μF	50 V	Ceramic
C218	QEW61HA-105Z	1 μF	"	Electrolytic
C219	QCF31HP-223Z	0.022 μF	"	Ceramic
C220	QEW51AA-107	100 μF	10 V	Electrolytic
C222	QCF31HP-223	0.022 μF	50 V	Ceramic
C301	QEW51HA-225	2.2 μF	"	Electrolytic
C302	QEB51EM-225	"	25 V	L.L.C. Electrolytic
C303	QEB51EM-335	3.3 μF	"	"
C304	QFP31HJ-361	360 pF	50 V	Plastic Film
C305	QFM31HK-473	0.047 μF	"	Mylar
C306	QEB51HM-224	0.22 μF	"	L.L.C. Electrolytic
C307	QEW51CA-227	220 μF	16 V	Electrolytic
C309	QCS31HJ-471Z	470 pF	50 V	Ceramic
C310	QCS31HJ-471Z	"	"	"
C311	QEW61CA-106Z	10 μF	16 V	Electrolytic
C312	QEW51CA-106	"	"	"
C313	QEW61HA-225Z	2.2 μF	50 V	"
C314	QEW61HA-225Z	"	"	"
C315	QFM31HK-682Z	6800 pF	"	Mylar
C316	QFM31HK-682	"	"	"
C317	QFM31HK-822	8200 pF	"	"
C318	QFM31HK-822	"	"	"
C319	QFM31HK-273	0.027 μF	"	"
C320	QFM31HK-273Z	"	"	"
C321	QFM31HK-822Z	0.0082 μF	"	"
C322	QFM31HK-822Z	"	"	"

Capacitors

Item No.	Part Number	Rating		Description
C401	QCS31HJ-5R0	5 pF	50 V	Ceramic
C402	QCS31HJ-150Z	15 pF	"	"
C403	QCS31HJ-331Z	330 pF	"	"
C404	QCS31HJ-150	15 pF	"	"
C405	QFM31HK-103	0.01 μF	"	Mylar
C406	QCF31HP-223Z	0.022 μF	"	Ceramic
C407	QCF31HP-223	"	"	"
C408	QCS31HJ-331	330 pF	"	"
C409	QFM31HK-102	1000 pF	"	Mylar
C410	QEW51CA-106	10 μF	16 V	Electrolytic
C411	QCF31HP-223Z	0.022 μF	50 V	Ceramic
C412	QEW61HA-105Z	1 μF	"	Electrolytic
C413	QEW61CA-106Z	10 μF	16 V	"
C414	QCF31HP-223Z	0.022 μF	50 V	Ceramic
C415	QEW61CA-476Z	47 μF	16 V	Electrolytic
C417	QFM31HK-682Z	6800 pF	50 V	Mylar
C418	QFM31HK-183Z	0.018 μF	"	"
C419	QCF31HP-223Z	0.022 μF	"	Ceramic
C420	QCF31HP-223Z	"	"	"
C421	QEW61HA-474Z	0.47 μF	"	Electrolytic
C422	QEW51CA-106	10 μF	16 V	"
C501	QEB51EM-475	4.7 μF	25 V	L.L.C. Electrolytic
C502	QEB51EM-475	"	"	"
C503	QCS31HJ-101Z	100 pF	50 V	Ceramic
C504	QCS31HJ-101	"	"	"
C505	QEW61CA-476Z	47 μF	16 V	Electrolytic
C506	QEW51CA-476	"	"	"
C507	QFM31HK-182Z	1800 pF	50 V	Mylar
C508	QFM31HK-182Z	"	"	"
C509	QFM31HK-682Z	6800 pF	50 V	"
C510	QFM31HK-682Z	"	"	"
C513	QCS31HJ-820	82 pF	"	Ceramic
C514	QCS31HJ-820Z	"	"	"
C515	QCS31HJ-151	150 pF	"	"
C516	QCS31HJ-151Z	"	"	"
C517	QFM31HK-332	3300 pF	"	Mylar
C518	QFM31HK-332	"	"	"
C519	QEZ0046-105	1 μF	"	Electrolytic
C520	QEZ0046-105	"	"	"
C521	QEW61CA-476Z	47 μF	16 V	"
C522	QEW61CA-476Z	"	"	"
C551	QCS31HJ-331Z	330 pF	50 V	Ceramic
C552	QCS31HJ-331Z	"	"	"
C553	QFM31HK-273	0.027 μF	"	Mylar
C811	QEW41VA-227	220 μF	35 V	Electrolytic
C812	QCF31HP-103Z	0.01 μF	50 V	Ceramic
C813	QCF31HP-223Z	0.022 μF	"	"
C814	QCF31HP-223Z	"	"	"
TC5	QAT3001-005			Trimmer

Resistors

Item No.	Part Number	Rating		Description
R101	QRD141J-105S	1 MΩ	1/4 W	Carbon
R102	QRD141J-470S	47 Ω	"	"
R103	QRD141J-101S	100 Ω	"	"
R104	QRD141J-223S	22 kΩ	"	"
R105	QRD141J-472S	4.7 kΩ	"	"
R106	QRD141J-102S	1 kΩ	"	"
R107	QRD141J-101S	100 Ω	"	"
R108	QRD141J-470S	47 Ω	"	"
R109	QRD141J-561S	560 Ω	"	"
R110	QRD141J-103S	10 kΩ	"	"
R111	QRD141J-103S	"	"	"
R112	QRD141J-222S	2.2 kΩ	"	"
R201	QRD141J-101S	100 Ω	"	"
R203	QRD141J-332S	3.3 kΩ	"	"
R204	QRD141J-821S	820 Ω	"	"
R205	QRD141J-331S	330 Ω	"	"
R206	QRD141J-102S	1 kΩ	"	"
R207	QRD141J-271S	270 Ω	"	"
R208	QRD126J-220	22 Ω	1/2 W	Uninflammable Carbon
R209	QRD141J-331S	330 Ω	1/4 W	Carbon
R210	QRD141J-474S	470 kΩ	"	"
R211	QRD126J-100	10 Ω	1/2 W	Uninflammable Carbon
R213	QRD141J-562S	5.6 kΩ	1/4 W	Carbon
R214	QRD141J-432S	4.3 kΩ	"	"
R215	QRD141J-682S	6.8 kΩ	"	"
R216	QRD141J-271S	270 Ω	"	"
R218	QRD141J-123S	12 kΩ	"	"
R220	QRD141J-472S	4.7 kΩ	"	"
R221	QRD141J-153S	15 kΩ	"	"
R222	QRD141J-472S	4.7 kΩ	"	"
R223	QRD141J-153S	15 kΩ	"	"
R224	QRD181J-104S	100 kΩ	"	"
R301	QRD141J-102S	1 kΩ	"	"
R302	QRD141J-223S	22 kΩ	"	"
R303	QRD141J-104S	100 kΩ	"	"
R304	QVP4A0B-103	10 kΩ		Variable
R305	QRD141J-103S	"	1/4 W	Carbon
R306	QRD141J-103S	"	"	"
R308	QRD126J-181	180 Ω	1/2 W	Uninflammable Carbon
R309	QRD141J-104S	100 kΩ	1/4 W	Carbon
R310	QRD126J-100	10 Ω	1/2 W	Uninflammable Carbon
R311	QRD141J-303S	30 kΩ	1/4 W	Carbon
R312	QRD141J-303S	"	"	"
R313	QRD141J-473S	47 kΩ	"	"
R314	QRD141J-473S	"	"	"
R315	QRD141J-223S	22 kΩ	"	"
R316	QRD141J-223S	"	"	"
R318	QVP4A0B-474	470 kΩ		Variable
R319	QRD141J-152S	1.5 kΩ	1/4 W	Carbon
R320	QRD141J-152S	"	"	"
R321	QRD141J-122S	1.2 kΩ	"	"
R322	QRD141J-122S	"	"	"
R325	QRD141J-103S	10 kΩ	"	"
R326	QRD141J-103S	"	"	"
R327	QRD141J-474S	470 kΩ	"	"
R401	QRD141J-472S	4.7 kΩ	"	"

Resistors

Item No.	Part Number	Rating		Description
R402	QRD141J-151S	150 Ω	1/4 W	Carbon
R403	QRD141J-331S	330 Ω	"	"
R404	QRD141J-103S	10 kΩ	"	"
R405	QRD141J-103S	"	"	"
R406	QRD141J-152S	1.5 kΩ	"	"
R408	QRD141J-103S	10 kΩ	"	"
R409	QRD141J-683S	68 kΩ	"	"
R411	QRD141J-472S	4.7 kΩ	"	"
R412	QRD141J-222S	2.2 kΩ	"	"
R413	QRD141J-473S	47 kΩ	"	"
R414	QRD126J-101	100 Ω	1/2 W	Uninflammable Carbon
R415	QRD141J-184S	180 kΩ	1/4 W	Carbon
R416	QRD141J-333S	33 kΩ	"	"
R501	QRD141J-104S	100 kΩ	"	"
R502	QRD141J-104S	"	"	"
R503	QRD141J-222S	2.2 kΩ	"	"
R504	QRD141J-222S	"	"	"
R505	QRD141J-104S	100 kΩ	"	"
R506	QRD141J-104S	"	"	"
R507	QRD141J-561S	560 Ω	"	"
R508	QRD141J-561S	"	"	"
R509	QRD141J-182S	1.8 kΩ	"	"
R510	QRD141J-182S	"	"	"
R511	QRD141J-393S	39 kΩ	"	"
R512	QRD141J-393S	"	"	"
R513	QRD141J-474S	470 kΩ	"	"
R514	QRD141J-474S	"	"	"
R515	QRD141J-564S	560 kΩ	"	"
R516	QRD141J-564S	"	"	"
R517	QRD141J-470S	47 Ω	"	"
R518	QRD141J-470S	"	"	"
R519	QRD141J-104S	100 kΩ	"	"
R520	QRD141J-104S	"	"	"
R523	QRD126J-100	10 Ω	1/2 W	Uninflammable Carbon
R524	QRD126J-680	68 Ω	"	"
R551	QRD141J-332S	3.3 kΩ	1/4 W	Carbon
R552	QRD141J-332S	"	"	"
R555	QRD141J-153S	15 kΩ	"	"
R556	QRD141J-153S	"	"	"
R557	QRD141J-564S	560 kΩ	"	"
R558	QRD141J-564S	"	"	"
R559	QRD141J-471S	470 Ω	"	"
R560	QRD141J-471S	"	"	"
R811	QRD126J-272	2.7 kΩ	1/2 W	Uninflammable Carbon

Others

Item No.	Part Number	Rating		Description
	E60171-003			Heat Sink
	QAA2234-001			Variable Capacitor
CF201	E03609-001			Ceramic Filter

8-(2) TXX-51 Push Switch P.C.Board Ass'y

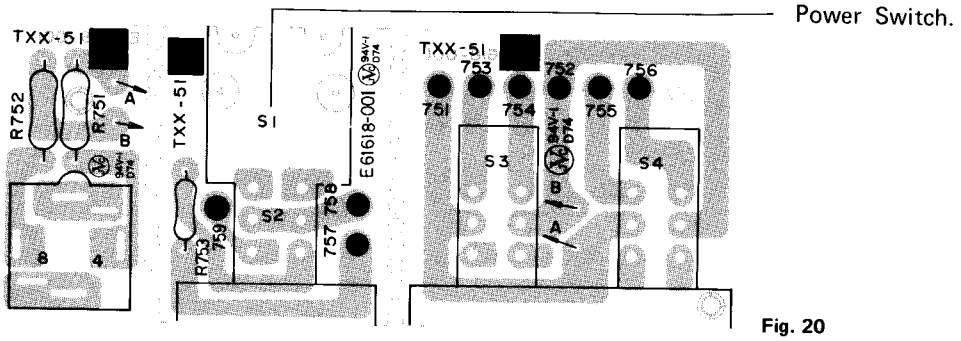


Fig. 20

Resistors

Item No.	Part Number	Rating		Description
R751	QRD126J-221	220 Ω	1/2 W	Uninflammable
R752	QRD126J-221	"	"	"
R753	QRD141J-102S	1 kΩ	1/4 W	Carbon

Others

Item No.	Part Number	Rating		Description
	QSP0020-002	5 A/80 A	250 V	Power Switch
	QMS6301-001			Headphone Jack Ass'y
	QSP0029-004			Speaker Push Switch

8-(3) TPS-53Y AC Fuse P.C.Board Ass'y

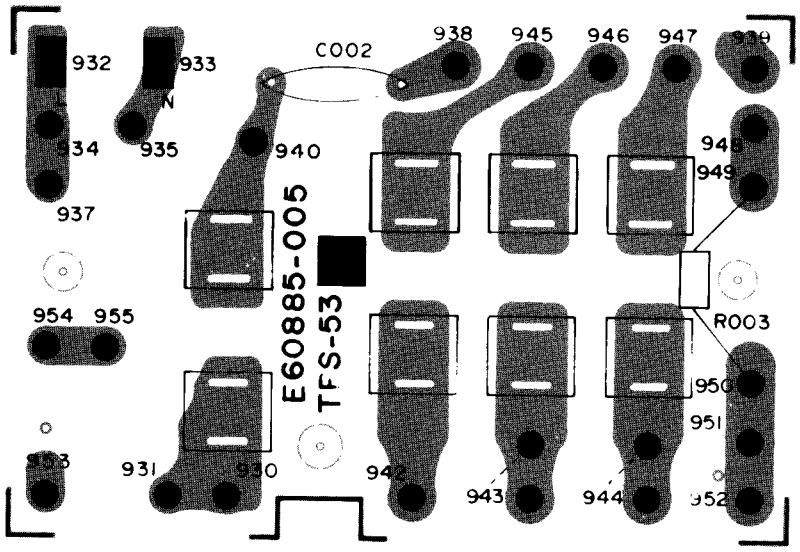


Fig. 21

Item No.	Part Number	Rating	Description	
	E48965-002	Fuse Clip		
	QMF51A2-1R25	Fuse	1.25 A	250 V
	QMF51A2-1R0	Fuse	1 A	250 V
	QMF51A2-3R15	Fuse	3.15 A	250 V

8-(4) TAP-268B Power Amp. & Power Supply P.C.Board Ass'y

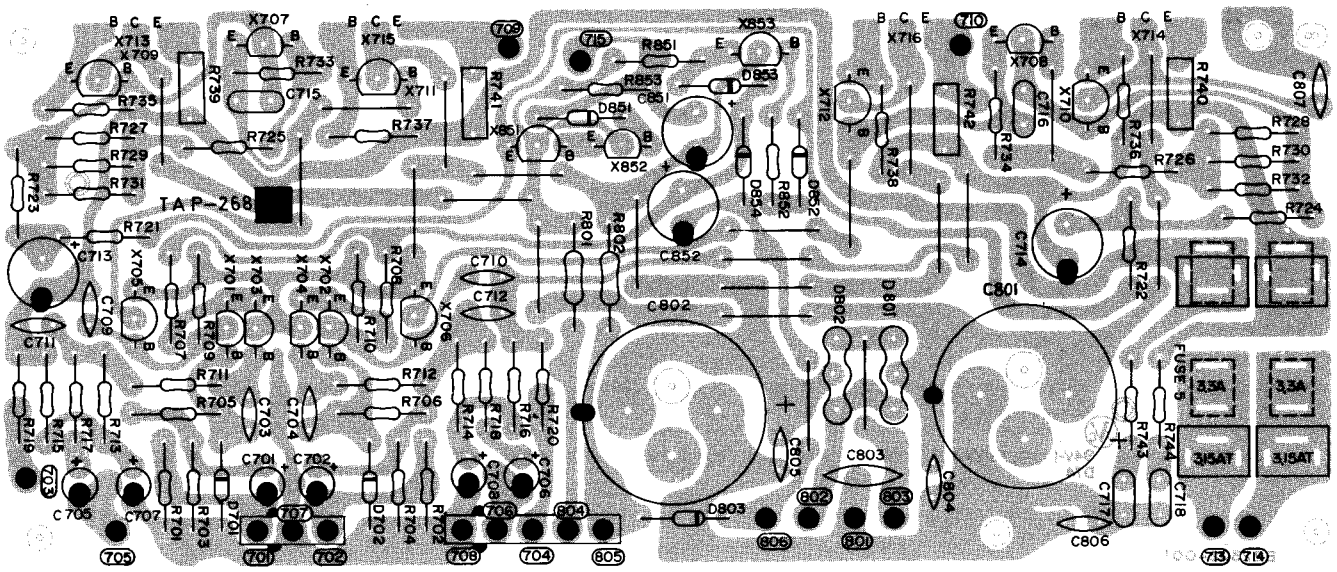


Fig. 22

Transistors

Item No.	Part Number	Rating		Description	Maker
X701	2SA872AV (E)	300 mW	200 MHz	Silicon	Hitachi
X702	2SA872AV (E)	"	"	"	"
X703	2SA872AV (E)	"	"	"	"
X704	2SA872AV (E)	"	"	"	"
X705	2SD438 (E)	750 mW	100 MHz	"	Sanyo
X706	2SD438 (E)	"	"	"	"
X707	2SC458 (C)	200 mW	230 MHz	"	Hitachi
X708	2SC458 (C)	"	"	"	"
X709	2SD438 (E)	750 mW	100 MHz	"	Sanyo
X710	2SD438 (E)	"	"	"	"
X711	2SB560 (E)	"	"	"	"
X712	2SB560 (E)	"	"	"	"
X713	2SD313V (D, E)	30 W	8 MHz	"	"
X714	2SD313V (D, E)	"	"	"	"
X715	2SB507V (D, E)	"	"	"	"
X716	2SB507V (D, E)	"	"	"	"
X851	2SD438 (E)	750 mW	100 MHz	"	"
X852	2SC1775AV (F)	300 mW	200 MHz	"	Hitachi
X853	2SA872AV (E)	"	"	"	"

Diodes

Item No.	Part Number	Rating		Description	Maker
D701	1S2473			Silicon	Toyo Dengu
D702	1S2473			"	"
D801	ESAB02-02C			"	Kyodo Denki
D802	ESAB02-02N			"	"
D803	WZ-130	13 V		Zener	JRC
D851	1S2473			Silicon	Toyo Dengu
D852	1S2473			"	"
D853	1S2473			"	"
D854	WZ-090A	9 V		Zener	JRC

Capacitors

Item No.	Part Number	Rating		Description
C701	QEW41HA-105	1 μF	50 V	Electrolytic
C702	QEW41HA-105	"	"	"
C703	QCS11HJ-391	390 pF	"	Ceramic
C704	QCS11HJ-391	"	"	"
C705	QEW41CA-106	10 μF	16 V	Electrolytic
C706	QEW41CA-106	"	"	"
C707	QEW41AA-476	47 μF	10 V	"
C708	QEW41AA-476	"	"	"
C709	QCS11HJ-180	18 pF	50 V	Ceramic
C710	QCS11HJ-180	"	"	"
C711	QCS11HJ-270	27 pF	"	"
C712	QCS11HJ-270	"	"	"
C713	QEW41HA-226	22 μF	"	Electrolytic
C714	QEW41HA-226	"	"	"
C715	QFM41HK-122	1200 pF	"	Mylar
C716	QFM41HK-122	"	"	"
C717	QFM41HK-473	0.047 μF	"	"
C718	QFM41HK-473	"	"	"
C801	QEW81VA-478	4700 μF	35 V	Electrolytic
C802	QEW81VA-478	"	"	"
C803	QCF12HP-103	0.01 μF	500 V	Ceramic
C804	QCF11HP-103	"	50 V	"
C805	QCF11HP-103	"	"	"
C807	QCF11HP-103	"	"	"
C851	QEW42AA-106	10 μF	100 V	Electrolytic
C852	QEW41VA-107	100 μF	35 V	"

Resistors

Item No.	Part Number	Rating		Description
R701	QRD141J-224	220 kΩ	1/4 W	Carbon
R702	QRD141J-224	"	"	"
R703	QRD141J-683	68 kΩ	"	"
R704	QRD141J-683	"	"	"
R705	QRD141J-332	3.3 kΩ	"	"
R706	QRD141J-332	"	"	"
R707	QRD141J-103	10 kΩ	"	"
R708	QRD141J-103	"	"	"
R709	QRD141J-152	1.5 kΩ	"	"
R710	QRD141J-152	"	"	"
R711	QRD141J-332	3.3 kΩ	"	"
R712	QRD141J-332	"	"	"
R713	QRD141J-122	1.2 kΩ	"	"
R714	QRD141J-122	"	"	"
R715	QRD141J-473	47 kΩ	"	"
R716	QRD141J-473	"	"	"
R717	QRD141J-562	5.6 kΩ	"	"
R718	QRD141J-562	"	"	"
R719	QRD141J-472	4.7 kΩ	"	"
R720	QRD141J-472	"	"	"
R721	QRD126J-272	2.7 kΩ	1/2 W	Uninflammable Carbon
R722	QRD126J-272	"	"	"
R723	QRD126J-392	3.9 kΩ	"	"
R724	QRD126J-392	"	"	"
R725	QRD141J-222	2.2 kΩ	1/4 W	Carbon

Resistors

Item No.	Part Number	Rating		Description
R726	QRD141J-222	2.2 kΩ	1/4 W	Carbon
R727	QRD141J-331	330 Ω	"	"
R728	QRD141J-331	"	"	"
R729	QRD141J-681	680 Ω	"	"
R730	QRD141J-681	"	"	"
R731	QRD141J-182	1.8 kΩ	"	"
R732	QRD141J-182	"	"	"
R733	QRD126J-102	1 kΩ	1/2W	"
R734	QRD126J-102	"	"	"
R735	QRD126J-391	390 Ω	1/4W	Uninflammable Carbon
R736	QRD126J-391	"	"	"
R737	QRD126J-391	"	"	"
R738	QRD126J-391	"	"	"
R739	QRM024K-R47	0.47 Ω	2 W	Metalized Plate
R740	QRM024K-R47	"	"	"
R741	QRM024K-R47	"	"	"
R742	QRM024K-R47	"	"	"
R743	QRD126J-100	10 Ω	1/2 W	Uninflammable Carbon
R744	QRD126J-100	"	"	"
R801	QRG017J-470S	47 Ω	1 W	Uninflammable O.M.
R802	QRG017J-102S	1 kΩ	"	"
R851	QRD126J-272	2.7 kΩ	1/2 W	Uninflammable Carbon
R852	QRD141J-104	100 kΩ	1/4 W	Carbon
R853	QRD141J-474	"	"	"

Others

Item No.	Part Number	Rating		Description
	E48965-002			Contact Clip
	E34916-001			Heat Sink
	E41541-21			Bushing
	QMF51A2-3R15	3.15 A	250 V	Fuse

8-(5) TXX-68A Lamp P.C.Board Ass'y

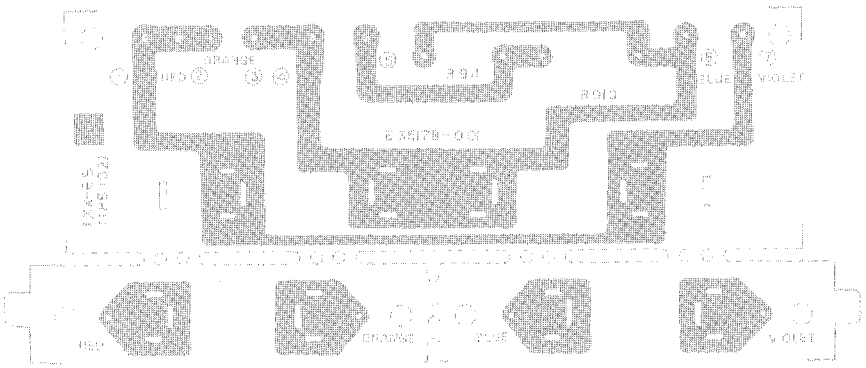


Fig. 23

Resistors

Item No.	Part Number	Rating		Description
R910	QRG017J-101S	100 Ω	1 W	O.M.F.

Other

Item No.	Part Number	Rating	Description
	E45524-001		Contact Clip

8-(6) TAC-472A Volume & Tone Control P.C.Board Ass'y

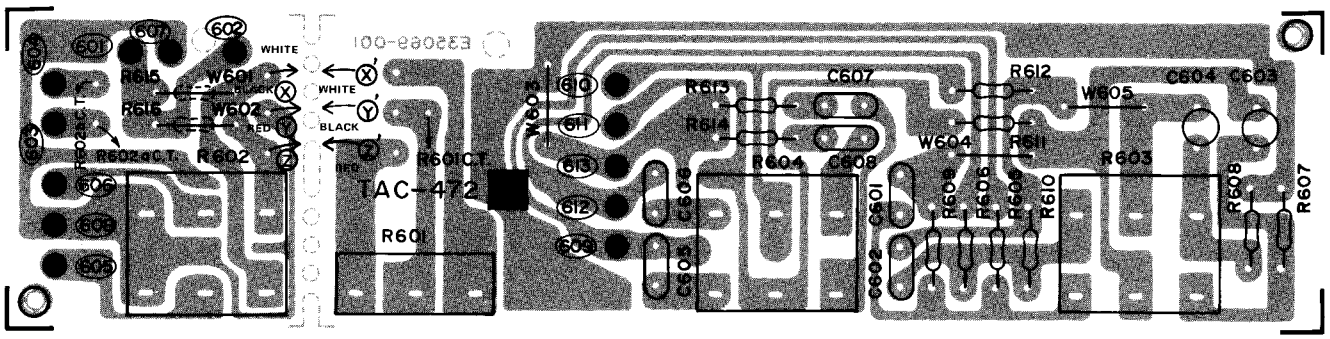


Fig. 24

Capacitors

Item No.	Part Number	Rating		Description
C601	QFM41HK-273	0.027 μF	50 V	Mylar
C602	QFM41HK-273	"	"	"
C603	QEZ0046-224	0.22 μF	"	Non Polar Electrolytic
C604	QEZ0046-224	"	"	"
C605	QFM41HK-332	3300 pF	"	Mylar
C606	QFM41HK-332	"	"	"
C607	QFM41HK-333	0.033 μF	"	"
C608	QFM41HK-333	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R601	QVB8A2W-6F5V	250 kW		Balance
R602	QVZ1219-002	"		Volume
R603	QVC3A2C-215V	100 kΩ		"
R604	QVC3A2C-215V	"		"
R607	QRD141J-123S	12 kΩ	1/4 W	Carbon
R608	QRD141J-123S	"	"	"
R609	QRD141J-152S	1.5 kΩ	"	"
R610	QRD141J-152S	"	"	"
R611	QRD141J-104S	100 kΩ	"	"
R612	QRD141J-104S	"	"	"
R613	QRD141J-182S	1.8 kΩ	"	"
R614	QRD141J-182S	"	"	"
R615	QRD141J-561S	560 Ω	"	"
R616	QRD141J-561S	"	"	"

8-(6) TAC-462B Terminals P.C.Board Ass'y

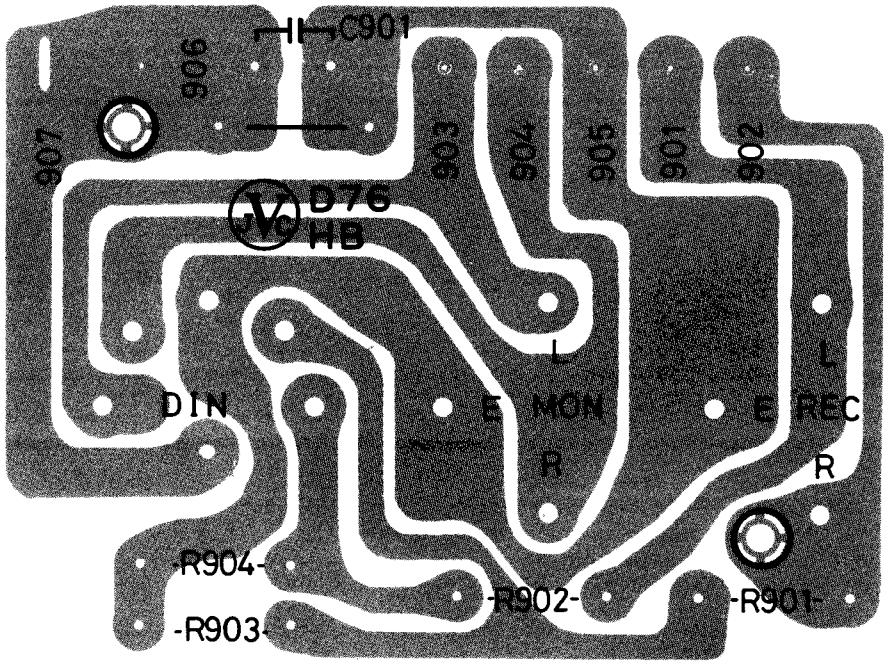


Fig. 25

Capacitor

Item No.	Part Number	Rating		Description
C901	QCF11HP-223	0.022 μF	50 V	Ceramic

Resistors

Item No.	Part Number	Rating		Description
R901	QRD141J-334S	340 kΩ	1/4 W	Carbon
R902	QRD141J-334S	"	"	"
R903	QRD141J-124S	120 kΩ	"	"
R904	QRD141J-124S	"	"	"

Other

Item No.	Part Number	Rating	Description
	E03591-001		Terminal Ass'y (DIN socket)

9. Packing Materials and Part Numbers

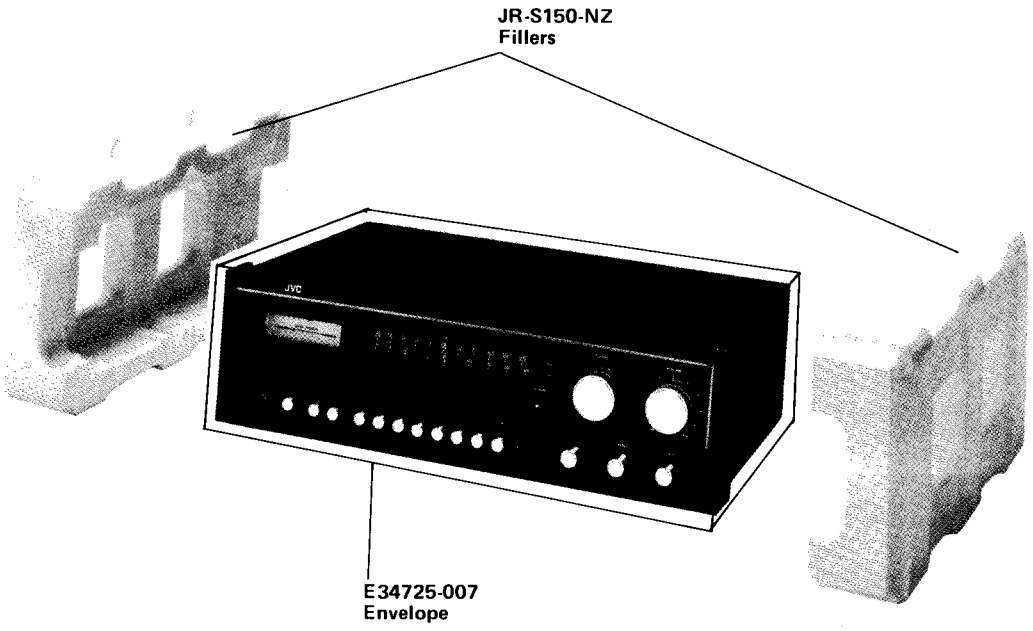


Fig. 26

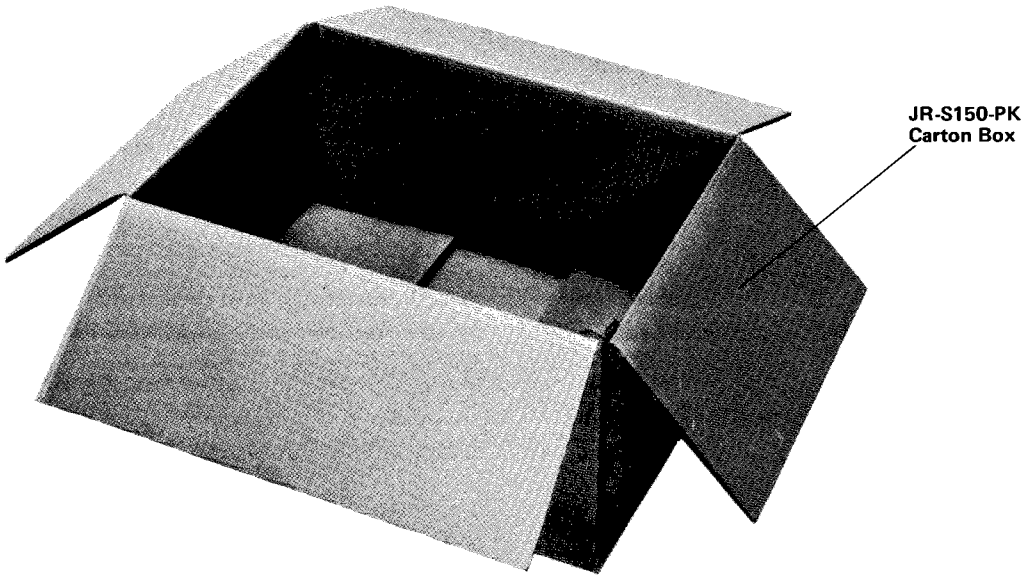


Fig. 27

10. Accessories List

Item No.	Part Number	Description	Q'ty
1	E64207-002	Envelope for Instruction Book & Others	1
2	E03614-002	Feeder Antenna	1

11. JR-S150 Schematic Diagram

Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TFC-20	FM/AM Tuner & Equalizer Amp. P.C. Board Ass'y	13
TXX-51	Push Switch P.C. Board Ass'y	19
TPS-53Y	AC Fuse P.C. Board Ass'y	19
TAP-268B	Power Amp. & Power Supply P.C. Board Ass'y	20
TXX-68A	Lamp P.C. Board Ass'y	22
TAC-472A	Volume & Tone Control P.C. Board Ass'y	23
TAC-462B	Terminals P.C. Board Ass'y	24

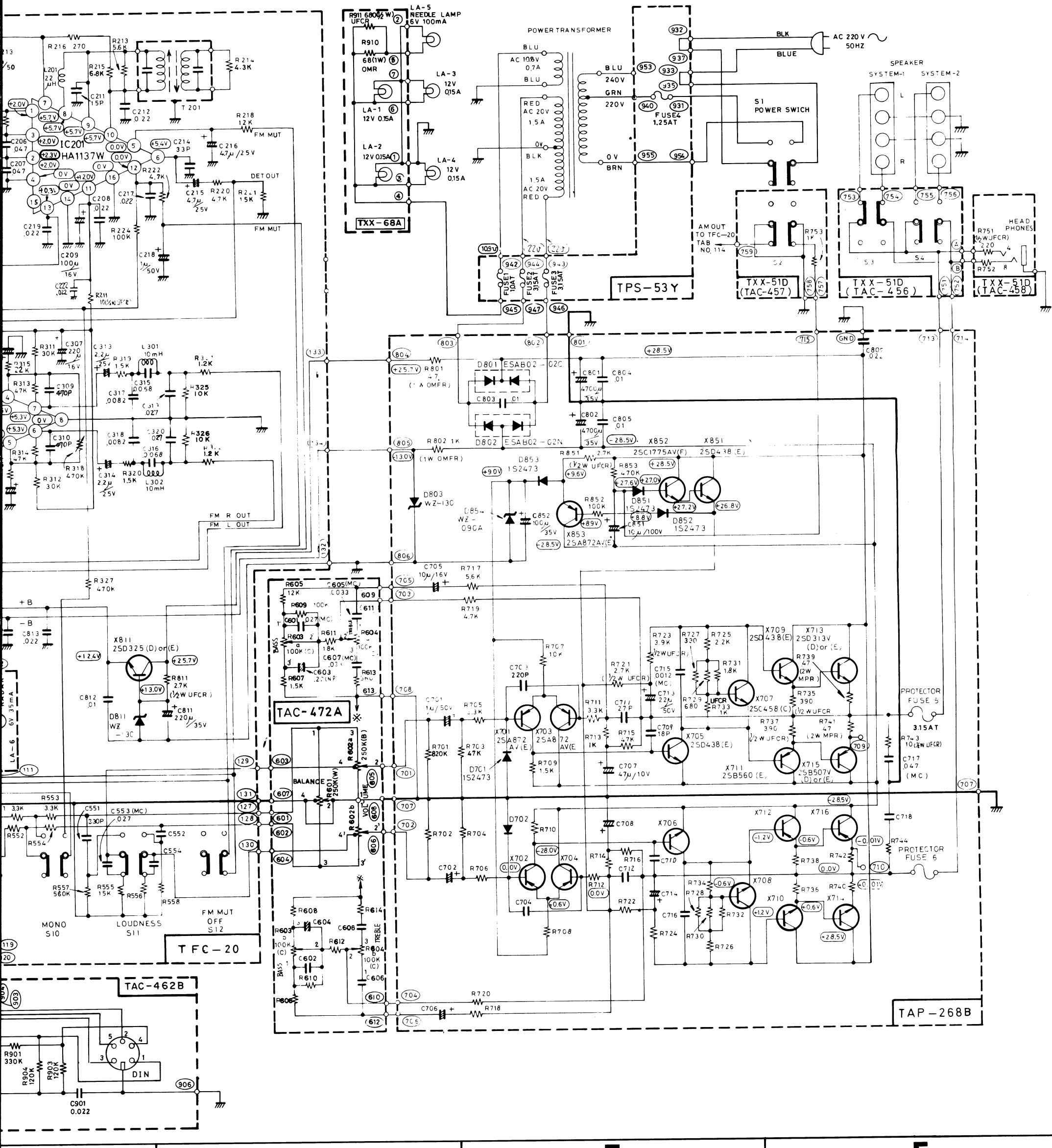
SWITCHES ■ : ON ▭ : OFF

S 1 : POWER SWITCH
S 2 : MUTING SWITCH
S 3 : SPEAKER SELECTOR SWITCH (SYSTEM – 1)
S 4 : SPEAKER SELECTOR SWITCH (SYSTEM – 2)
S 5 : AM SELECTOR SWITCH
S 6 : FM SELECTOR SWITCH
S 7 : PHONO SELECTOR SWITCH
S 8 : AUX SELECTOR SWITCH
S 9 : TAPE MONITOR SWITCH
S 10 : MONO SWITCH
S 11 : LOUDNESS SWITCH
S 12 : FM MUTING OFF SWITCH

AUX REC TAPE MON

VOLUME

R601	BALANCE VOLUME
R602	MASTER VOLUME
R603	TONE (BASS) VOLUME
R604	TONE (TREBLE) VOLUME
NO USER	SERVICEABLE VOLUME
R304	PLL 76KHZ ADJ VOLUME
R318	SEPARATION CONTROL VOLUME



EC TAPE MON

BALANCE VOLUME
MASTER VOLUME
TONE (BASS) VOLUME
TONE (TREBLE) VOLUME
SERVICEABLE VOLUME
PLL 76KHZ ADJ VOLUME
SEPARATION CONTROL VOLUME

VOLTAGE

(V) DC VOLTAGE AT NON SIGNAL INPUT
(V) AC VOLTAGE AT NON SIGNAL INPUT
(V) DC VOLTAGE AT AM POSITION

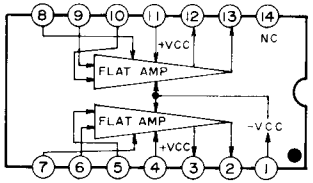
USED PARTS (REFFER TO SERVICE MANUAL)

RESISTORS
- UFCR : UNINFLAMMABLE CARBON RESISTOR
- UFOMR : UNFLAMMABLE OXIDE METAL RESISTOR
- MPR : METAL PLATE RESISTOR
- COMP : COMPOSITION RESISTOR
- OTHERS ARE CARBON RESISTOR

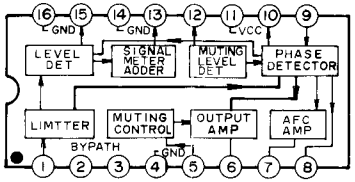
CAPACITORS
- LLC : LOW LEAKAGE CURRENT ELECTROLYTIC TYPE
- NP : NON POLAR TYPE
- MC : MYLAR TYPE
- PP : PLASTIC FILM TYPE
- OTHERS ARE CERAMIC TYPE OR ELECTROLYTIC TYPE

IC BLOCK DIAGRAM

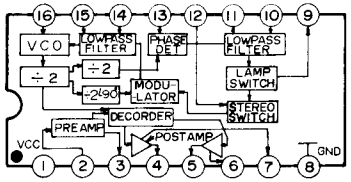
HA 1452W
(IC 501 : EQUALIZER STAGE)



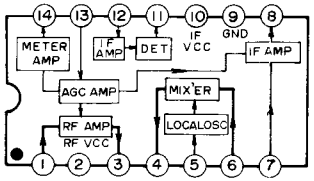
HA 1137W
(IC 201 : FM IF STAGE)



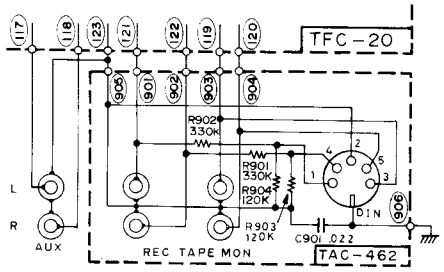
HA 1196
(IC 301 : FM MPX STAGE)



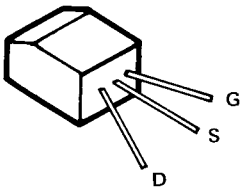
HA 1151
(IC 401 : AM IF STAGE)



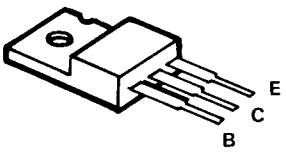
DIN SOCKET ASS'Y
(NO DIN SOCKET IS INSTALLED FOR USA AND CANADA)



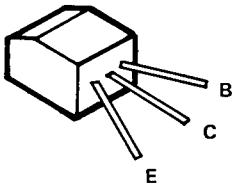
12. Transistor, I.C.and Diode Lead Identification



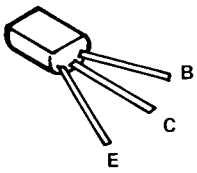
2SK55(D)



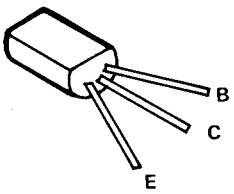
2SD325 (E)
2SD313 (D, E)
2SB507 (D, E)



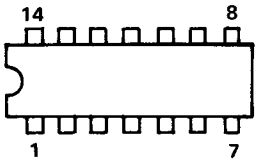
2SC458(C)
2SC535(B,C)
2SC461(C)
2SC1342(B,C)



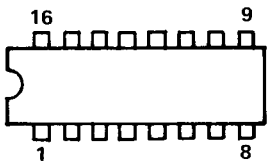
2SC1775AV (F)
2SA872AV (E)



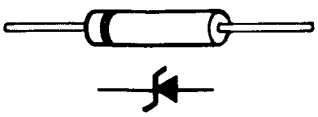
2SD438
2SB560



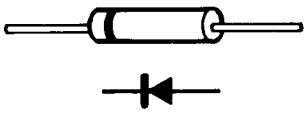
HA1151
HA1452W



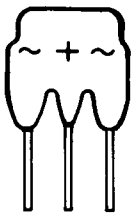
HA1137W
HA1196



WZ130
WZ090



1S2473
SIB01-02



ESAB02-02C
ESAB02-02N